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Impact of farmers' internal displacement on household food security in Benue State, Nigeria

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ABSTRACT

In summary, the study focused on the impact of internal displacement on household food security among farmers in Benue State, Nigeria. The study employed a social survey design, with 429 respondents selected using cluster sampling, random sampling, and purposive sampling. The findings indicated that a significant proportion of internally displaced farmers were in the age group of 56 to 65, with a majority of them being female and having completed only elementary education. The study also highlighted the farming experience and land sizes of the respondents. The results demonstrated that internal displacement had negative effects on food security, including a reduction in food production, acute food shortages, increased food prices, and restricted access to safe food. Furthermore, the correlation analysis revealed a strong positive correlation between the displacement of rural crop farmers and household food insecurity. However, the correlation was not statistically significant, suggesting that other factors may also influence household food insecurity. In conclusion, the study emphasized the catastrophic impact of internal displacement on internally displaced persons, leading to significant changes in family dynamics and identities. The findings highlight the urgent need for measures to address internal displacement, mitigate its effects on food security, and provide support to affected farmers and households in Benue State, Nigeria.

Keywords: Internal Displacement, Food security, Rural farmers, Impact.

1. INTRODUCTION

Internal displacement is a common consequence of various forms of violence, both of human origin and natural disasters, in Nigeria. These displacements disrupt people's freedom of movement and result in socioeconomic challenges for individuals. Of particular concern is the internal displacement caused by recent violent conflicts and wars. Internally Displaced Persons (IDPs) are victims of injustices and violent confrontations perpetrated by their own government or agents of communal clashes, riots, terrorism, natural disasters, and religious conflicts (Hamzat, 2013).

Nigeria has experienced a series of clashes, including Boko Haram in the northeast, farmers/herders crises in multiple states, agitation for the Republic of Biafra in the southeast, and militants in the Niger Delta region. These conflicts

impede people's fundamental right to move freely. Villagers become unsuspecting targets during their daily activities, and their homes are destroyed, leaving them homeless and displaced. Without immediate assistance, affected individuals may rely on prolonged and costly humanitarian aid to meet their food needs in the following years. The broader impact includes a lack of economic opportunities, which can lead to radicalization of the youth and their involvement in armed groups, perpetuating civil unrest.

Nomadic herdsmen, who migrate in search of pasture for their livestock, face environmental degradation and inadequate land for grazing. Nigeria has recently witnessed violent incidents resulting from the activities of these nomadic herdsmen, primarily from the Fulani tribe, who move across the country in search of water and fresh pastures. These herders, with no permanent habitation, are found in makeshift towns scattered throughout northern Nigeria and other West African countries. Their transient lifestyle has little regard for land ownership (Nzeh, 2015).

The displacement of farmers poses a significant threat to Nigeria's food security. Farmers who are displaced abandon their fields, losing their crops, labor force, and capital invested in agriculture. The ongoing displacement of farmers is a major concern for food security in Nigeria. The invasion and occupation of farmland by herders have become a major issue impacting food security, as it leads to crop destruction and loss of income for farmers (Roseline and Amusain, 2017). Worldwide displacement has also contributed to an increase in global hunger. Rural areas and farmer households are particularly affected, jeopardizing food security and rural socioeconomic conditions (FAO, 2017).

The continuous violent conflicts have detrimental effects on crop farmers, resulting in reduced output, income, and food security. Farmers are forced to abandon their farms due to the fear of attacks and crop destruction by well-armed herders. This leads to minimal income and creates cycles of poverty and hunger, especially among vulnerable groups such as women and children. The conflicts disrupt daily activities, hinder access to education, and cause widespread displacement. These conflicts have the potential to worsen insecurity and food crises, especially in rural areas where most conflicts are localized. The invasion and occupation of farmlands by Fulani herders pose a threat to national food security, livestock production, and poverty eradication, with farmers being particularly vulnerable (Dimelu et al., 2017).

Given the situation in Benue State, this study investigates the impact of internal displacement on household food security among farmers. The study also examines the coping mechanisms and efforts undertaken to address internal displacement in the study area.

2. MATERIALS AND METHODS

The study utilized a social survey design to gather data and investigate the research objectives. The survey design involved sampling a large number of subjects through interviews or the use of questionnaires. The research was conducted in Benue State, located in Nigeria's north-central region. Benue State has a population of approximately 5,741,800 (13) and covers a land area of 34,059km², ranking as the 11th largest state in Nigeria. The capital of Benue State is Makurdi. The state derives its name from the River Benue and was established on February 3, 1976, from the Benue Plateau, along with portions of Kwara State, including Igala, which now form part of the present-day Kogi State. Some well-known towns in Benue State include Vandeikya, Gboko, Ogbadibo, Katsina-ala, Okpokwu, Obi, and the state capital, Makurdi.

Benue State is situated in Nigeria and shares borders with five other states. It is located at a longitude of 70471, 1000E and latitude of 60251, 8081N. The state shares its borders with Nasarawa State to the north, Taraba State to the east, Cross River State to the south, Enugu State to the southwest, and Kogi State to the west. It also shares a border with the Republic of Cameroon to the southeast.

There are 23 local government areas in Benue State namely Ado, Katsina-Ala, Oju, Agatu, Konshisha, Okpokwu, Apa, Kwande, Oturkpo, Buruku, Logo, Tarka, Gboko, Makurdi, Ukum, Guma, Obi, Ushongo, Gwer-West, Ogbadibo, Vandeikya, Gwer, Ohimini. However, the dominant dwellers in Benue State are the Tiv, Idoma, Igede, Etulo, Abakpa, jukun, NyIfon, Akweya. The Tiv are the major dominant ethnic group, they occupied about 14 local government areas with the Etulo and Jukun, however, Idoma, IgedeAkweya, Nyifon occupy the remaining nine local government areas, while other migrants like the Igbo, Hausa, Yoruba and some other minor other tribes in Nigeria leave among them.

The respondents for this study were selected using a combination of cluster sampling, random sampling, and purposive sampling methods. The study focused on Benue State, which is divided into three senatorial districts: Zone A (North East), Zone B (North West), and Zone C (Benue South). These three senatorial districts served as the clusters for sampling. One local government area (LGA) was randomly chosen from each of the three senatorial districts based on having the highest number of displaced

people. Logo LGA was selected from Zone A, Makurdi LGA from Zone B, and Agatu LGA from Zone C. In addition, two internally displaced persons (IDP) camps and two communities were randomly selected from Logo and Makurdi LGAs.



Figure 1 Map of Benue State Showing Distribution of Local Government Areas by Zones

From Agatu LGA, two communities were chosen randomly. It should be noted that there are no IDP camps in Zone C as displaced individuals reside within the host community. The total number of registered displaced households in the six designated villages (11,353) and four IDP camps (4,886) amounts to 16,239, which represents the sample frame obtained from the 2018 data provided by the Benue State Emergency Management Agency.

Table 1 Sampling Frame of the Study Areas

Zones	LGAs	IDP Camp	HHS	Communities	HHS
A	Logo	Abeda Camp	422	Abeda community	3546
		Ayiin Camp	1271	Ugba community	1431
B	Makurdi	Abagena Camp	1990	Abagena Community	1165
		Agan Camp	1203	Ichwa community	1650
C	Agatu			Usha-Agatu	2214
				Engila-Agatu	1347

The sample size for each zone was determined by a mathematical formula given by Miller and Brewer, (2003) as;

$$n = \frac{N}{1 + N(\alpha)^2} \dots\dots\dots (1)$$

Where: N is the sample frame for the twelve communities,

n is the sample size and

α is the margin of error (fixed at 5%).

$$n = \frac{16239}{1 + 16239(0.05)^2} = 390$$

In addition, ten percent (10%) of the number of intended respondent was added to take care of unavailable, unreachable or unwilling respondents. This will make room for missing cases or responses. This will enable us the opportunity to ensure that responses do not fall below 390. That brings the total number to 429 respondents. Data for the study was analyzed using descriptive statistics such as frequencies and mean. Table 2 captures the details of the sample frame and the sample size for the selected local government areas in all the zones in the study area.

Table 2 Sample Size Selection Plan

Zones	LGAs	Camps	Sample frame	Sample size	Communities	Sample frame	Sample size
A	Logo	Abeda Camp	22	11	Abeda community	3546	93
		Ayiin Camp	271	33	Ugba community	1431	37
B	Makurdi	Abagena Camp	990	52	Abagena Community	1165	30
		Agan Camp	203	37	Ichwa community	1650	43
C	Agatu				Engila-Agatu	2214	58
					Usha-Agatu	1347	35
Sub total			4886	133		11353	296
Grand total		16,239			429		

The survey gathered information on respondents' socioeconomic factors such as age, gender, marital status, educational qualification, and religion. The data is in (Table 3).

3. RESULTS AND DISCUSSION

The data provides insights into the characteristics of the respondents. The majorities of the respondents were females (62.5%) and were in the age group of 56-65 years (39.4%). The highest proportions of respondents were married (45.2%), followed by widowed individuals (33.8%). In terms of income prior to displacement, a significant portion of respondents fell into the range of 251,000 - 500,000 (30.8%). Regarding the duration of displacement, the largest group had been displaced for 13-18 months (61.8%).

The study findings indicate that a significant proportion of the displaced population comprises elderly individuals, women, and children. This aligns with the assertion by FAO, (2020) that a considerable percentage, ranging from 35% to 65%, of internally displaced persons (IDPs) and refugees are aged 60 and above. These findings offer a demographic and socioeconomic overview of the respondents, which will be valuable in assessing the impact of displacement on various aspects of their lives, including food security

Table 3 Socioeconomic Characteristics of Displaced Farmers in the Area

Variable	Frequency	Percentage
Age		
Less than 30years	88	24.4
31 – 45	22	6.0
46 – 55	44	12.2
56 – 65	142	39.4
Above 65	64	18.0
Total	360	100
Sex		
Male	135	37.5
Female	225	62.5
Total	360	100
Marital Status		
Married	163	45.2
Single	76	21.1
Widowed	122	33.8
Total	360	100
Estimate of annual income from farm prior to displacement		
Less than 100,000	17	4.7
100,000 – 250,000	53	14.7
251,000 - 500,000	98	27.2

501,000 - 750,000	111	30.8
1,000,000 and above	81	22.5
Total	360	100
Number of years displaced		
1-6 months	66	18.2
7 – 12 months	5	1.5
13 – 18 months	223	61.8
19 – 24 months	45	12.5
25months and above	21	5.9
Total	360	100

Impact of Internal Displacement on Rural Crop Farmers' Food Security in Benue State

The findings reveal the impacts of internal displacement on various aspects of food security. Respondents strongly agreed or agreed on several key impacts. The majority agreed that internal displacement leads to a reduction in sufficient food production, resulting in food losses on farms and limited or no access to farmlands. There is also agreement that internal displacement causes an increase in food prices, a lack of access to safe food, and a negative impact on the nutritional status of IDPs. Respondents expressed concerns about the shortage of labor and uncertainties in cultivating new farmlands due to displacement.

The above is an evidence of food insecurity in the area as a result of the outflow of a huge number of physically active and economically productive people, both educated and uneducated, from the afflicted areas as a result of violence and constant attacks. It is well known that the problem of food insecurity is typically associated with rural households and the urban poor, who are more vulnerable to high food prices and limited access to food as a result of low income. Internal displacements also cause economic recessions, employment disruption, and erode finances for social protection, all of which contribute to food insecurity through these channels.

These findings underscore the significant challenges and disruptions that internal displacement poses to food security, emphasizing the need for interventions and support to address these issues and mitigate their impacts on affected populations. The consequences of internal displacement extend beyond immediate challenges, such as the loss of homes and livelihoods. Displacement disrupts access to education, which can have long-term implications for individuals' well-being and hinder their progress. Limited educational opportunities can restrict future earning potential, creating a cycle of poverty that persists even after the conflicts and displacement have ended.

The findings from this study support IDMC, (2019) conclusion that internal displacement has a wide-ranging impact on the lives of those affected, with both positive and negative consequences. However, the majority of the effects tend to be negative, with long-term consequences and vulnerability loops. For instance, the loss of income due to displacement can force young family members to drop out of school to support their parents, leading to limited educational opportunities and difficulties in obtaining quality jobs in the future.

These findings are consistent with other studies conducted globally, such as Durosaro and Ajiboye, (2011), who reported emotional problems experienced by IDPs, including nightmares, traumatic memories, and loss of livelihoods, frustrations, abuse, and threats. The plight of displaced people has become a significant crisis with worldwide implications. Internal displacement results in a significant decline in the production of nutritious food and contributes to hunger. The vulnerability of IDPs is further exacerbated by challenges in accessing quality food, healthcare services, education, employment opportunities, economic activities, and participation in decision-making processes that affect their lives. With some IDPs being sheltered in school buildings, both the displaced children and the local host communities face delays in education.

The findings also indicate that internal displacement results in the loss of safe, nutritious, and sufficient food, and continued internal displacement can eventually harm a nation's food staple. The majority of respondents strongly agreed that internal displacement has a detrimental impact on food security, as reflected in the mean score. Restricted access to farmland leads to decreased agricultural productivity and economic activity.

The data suggest that internal displacement has implications for food security in terms of agro-ecosystem degradation and limited or no access to land. This aligns with Terminiski, (2013) assertion that people may be forcibly displaced from their habitual homes without adequate compensation, guarantees, or social support mechanisms. Internal displacement also creates a fertile ground for human rights violations, such as torture, rape, murder, forced evictions, food insecurity, and cultural loss.

Table 4 Impact of displacement on food security

Impacts	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
Availability					
Internal displacement lowers the sufficient production of food	250 (69.4)	60 (16.6)	45 (12.5)	5 (1.38)	3.54
Food lost in the farm	344 (95.5) 3.8	16 (2.5)	-	-	3.88
Limited or no access to farm lands	311 (86) 3.4	39 (8.6) 0.32	10 (2.7)	-	3.78
Affordability					
Increase in food prices	210 (58.3)	140 (38.9)	7 (14)	3 (1.94)	3.55
Access					
Internal displacement causes lack of access to safe food.	213 (59.16)	98 (24.7)	32 (8.8)	17 (4.7)	3.38
Continuing internal displacement would finally result to total damage of national food staple	360 (100)	-	-	-	4
Utilization					
As a result of internal displacement, production of nutritious food is drastically reduced	198 (55)	142 (39.4)	11 (3.0)	9 (2.5)	3.47
Hunger	230 (63.8)	100 (27.7)	20 (5.5)	10 (2.7)	3.53
Internal displacement has negative impact on nutritional status on IDPs	250 (69.4)	80 (22.2)	20 (5.5)	10 (2.7)	3.58
Shortage of labour	198 (55)	142 (39.4)	11 (3.0)	9 (2.5)	3.47
Fear of uncertainties in cultivating new farm lands	300 (83.3)	60 (16.7)	-	-	3.8
Poverty					

Field survey, 2021: Decision rule: ≥ 2.5 = accepted < 2.5 = rejected

Figures in parenthesis are percentages

The findings support previous study claim that conflicts tend to impact food and commodity prices, affecting farmers' income and their vulnerability to food insecurity. Regardless of the cause, internal displacement consistently has negative socioeconomic consequences for millions of people worldwide. In cases of displacement resulting from violent conflicts, IDPs become victims of various injustices and violent confrontations perpetrated by their own government or agents of communal clashes, riots, terrorism, natural disasters, religious conflicts, and other factors (Hamzat, 2013).

Therefore, the findings confirm that the impact of internal displacement on IDPs is catastrophic, leading to profound changes in family structure, gender roles, relationships, and identities. This humanitarian crisis fractures social bonds within and between communities, plunges IDPs into economic hardships and poverty, reduces their living standards, and exposes them to increased vulnerability to psychological and physical violence. Displacement itself often violates the human rights of those affected, and the subsequent loss of homes, land, livelihoods, personal documents, family members, and social networks further undermines their ability to claim and enjoy a wide range of fundamental rights.

Relationship between Rural Crop Farmers Displacement and Household Food Insecurity in Benue State

The correlation analysis reveals a strong positive correlation coefficient of 0.713 between rural crop farmers' displacement and household food insecurity. The correlation is statistically non-significant ($p = 0.802$), indicating that the relationship between these two variables may be due to chance. The positive correlation suggests that as the displacement of rural crop farmers' increases, household food insecurity also tends to increase. This implies that the internal displacement of farmers has a detrimental impact on the food security of households. When farmers are forced to leave their farms and lose access to land and resources, it disrupts agricultural production and reduces the availability of food for their households.

Table 5 Correlations

		Rural crop farmers displacement	Household food insecurity
Rural crop farmers displacement	Pearson Correlation	1	.713
	Sig. (2-tailed)		.802
	N	360	360
Household food insecurity	Pearson Correlation	.713	1
	Sig. (2-tailed)	.802	
	N	360	360

The lack of statistical significance in the correlation coefficient suggests that there may be other factors influencing household food insecurity apart from the displacement of farmers. It is important to consider additional variables, such as socio-economic factors, access to markets, and availability of support systems, to obtain a more comprehensive understanding of the determinants of food insecurity in the study area.

Overall, the correlation findings highlight the importance of addressing the issue of internal displacement of rural crop farmers in order to mitigate its negative impact on household food security. Efforts should be made to provide support and resources to displaced farmers, as well as implement measures to promote agricultural productivity and ensure access to safe and nutritious food for affected households.

4. CONCLUSION

In conclusion, the displacement of farmers, particularly due to the Fulani herder threat, has emerged as a significant cause of internal displacement in the study area. This nomadic herder population, in search of water and pasture, can be found across major towns and remote villages. However, it is crucial to recognize that other factors, such as religious disagreements, poverty, ethnic tensions, and political subjugation, also contribute to the displacement of rural communities, including farmers.

The study highlights the detrimental impact of internal displacement on agricultural production, investment, and food security. The displacement of physically active and economically productive individuals, both educated and uneducated, has resulted in food insecurity among households. Regardless of the specific reasons for displacement, the socioeconomic consequences are consistently negative for millions of individuals worldwide. The findings further emphasize the strong positive association between the displacement of rural crop farmers and household food insecurity (correlation coefficient of 0.713).

Addressing the challenges associated with internal displacement caused by violent disputes and conflicts remains a significant concern. Efforts should be focused on providing support and assistance to the displaced farmers, promoting agricultural productivity, and ensuring access to safe and nutritious food for affected households. Additionally, addressing the underlying factors that contribute to displacement, such as religious tensions, poverty, and unequal wealth distribution, is essential in preventing future displacement and enhancing food security in the study area.

Informed consent

Not applicable.

Ethical approval

Not applicable.

Conflicts of interests

The authors declare that there are no conflicts of interests.

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Data and materials availability

All data associated with this study are present in the paper.

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